

SATELLITE TV
ANTENNA/RECEIVER

153

STANDARD TELEVISION SIGNAL

PC VBI DECODER
DECODER EXTRACTS VBI DATA
FROM TELEVISION VIDEO SIGNAL

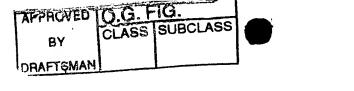
AIRMEDIA LIVE
COMMUNICATIONS
SERVER

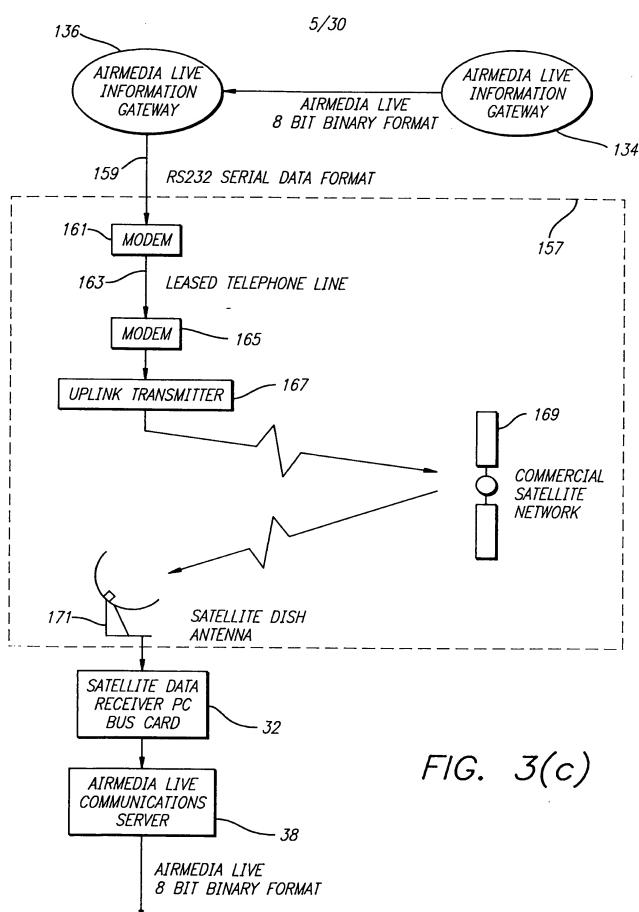
AIRMEDIA LIVE

38

8 BIT BINARY FORMAT

FIG. 3(b)





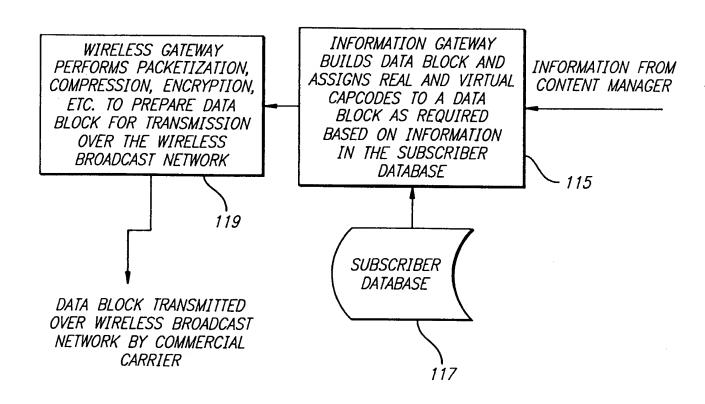


FIG. 4

BY CLASS SUBCLASS

FIG. 5-1

7/30

If Private Data Block Flag is clear: 1 = plain text, 2 = AirMedia Live data feed If bit clear, no custom header. If bit set, then a custom header is included in format. If Private Data Block Flag is set: 1 = Capcode reprogramming message, 2 If bit clear, then this is a message header. If bit set, then this is the data capcode and no virtual capcode is included in the data block. If bit set, then The value of this byte specifies the type of data contained in the data block. If bit clear, then this data block will be passed on to the Alert Panel for processing and display. If bit set, then this is a private data block to be If bit clear, then this data block is not targeted for a specific virtual Standard Cyclical Redundancy Code to verify data block integrity processed internally by the Communications Server. The version number of this data block's format. Description this data block contains a virtual capcode. = Binary file transfer. Protocol version used. the data block. block header Size 2 bytes 4 bits 1 byte 4 bits 1 bit 1 bit 1 bit 1 bit Private Data Block Flag Virtual Capcode Flag Custom Header Flag Data Block Version Data Block Type Item **Version Number** Header Type Header

Use Compression Flag	1 bit	If bit clear, then this data block is not compressed. If bit set, then
		compression is used and the compression type is specified in the Compression ID
		item.
Use Encryption Flag	1 bit	If bit clear, then this data block is not encrypted. If bit set, then this data
		block is encrypted.
Spare	2 bits	Reserved for future use.
Compression ID	1 byte	Included only if Use Compression Flag is set. Indicates the type of compression α
(optional)		nsed.
Virtual Capcode	1 byte	Included only if Virtual Capcode flag is set. Contains the virtual capcode to
(optional)		which this data block is targeted.
Size of Custom Header	1 byte	Included only if Custom Header Flag is set. Contains the size in bytes of the
(optional)		custom header.
Custom Header	variable	Reserved for future enhancements to data block protocol. Size determined from
(optional)		previous item.
Contents:		
Data Block Contents	variable	Information notification data from the information source to be processed by
		AirMedia Live software.

9/30

F/G. 6

Item	Size	Description
Header:		
Alert Length	1 byte	The size of the alert data in bytes.
Alert Type	1 byte	The value of this item defines the alert type (e.g. new e-mail arrival alert).
		Up to 256 predefined alert types are allowed.
Contents:		
Alert Data	variable	Personal alert notification data. Size of data is determined by the Alert Length
		item.

F1G. 9

Item	Size	Description
Header:		
Packet Type	4 bits	The value of this item indicates the packet type: 0 = Standard AirMedia Live
Marine		Packet; 1 = Single Packet Data Block; if the left most bit (high bit) is set,
	,	then this is a Binary Alert Packet.
Data Block ID	12 bits	The ID of the data block contained in this packet.
Contents:		
Packet Contents	variable	variable The header and contents of the data block contained in this packet.

APPROVED O.G. FIG.

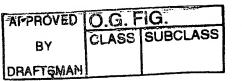
BY CLASS SUBCLASS

DRAFTSMAN

Item	Size	Description
Header:		
CRC	2 bytes	Standard Cyclical Redundancy Code to verify message integrity.
Header Type	1 bit	If bit clear, then this is a message header. If bit set, then this is the data
		block header.
Custom Header Flag	1 bit	If bit clear, no custom header. If bit set, then a custom header is included in
		the message.
Data Block ID	14 bits	ID of the data block to which this message belongs.
Message Number	1 byte	The position of this message in the data block (i.e. message sequence number).
Total Messages	1 byte	Total number of messages in the data block.
Size of Custom Header	1 byte	Included only if Custom Header Flag is set. Contains the size in bytes of the
(optional)		custom header.
Custom Header	variable	Reserved for future enhancements to message protocol. Size determined from
(optional)		previous item.
Contents:		
Message Contents	variable	The data portion of the message.

PROVED O.G. FIG. BY DRAFTGMAN

Item	Size	Description
Header:		
Packet Type	4 bits	The value of this item indicates the packet type: 0 = Standard AirMedia Live
		Packet; 1 = Single Packet Data Block; if the left most bit (high bit) is set,
		then this is a Binary Alert Packet.
Total Packets Flag	1 bit	If bit is clear, then the Total Data Packets and Total Error Correction Packets
		items are not present. If bit is set, then the Total Data Packets and Total
		Error Correction Packets items are present.
Message ID	11 bits	The number of the message to which this packet belongs.
Packet Number	1 byte	The position of this packet in the message (packet sequence number).
Total Data Packets	1 byte	Total number of data packets in the message (does not include error correction
		packets).
Total Error Correction	1 byte	Total number of Reed-Solomon forward error correction packets in the message.
Packets		
Contents:		
Packet Contents	variable	The data portion of the packet.



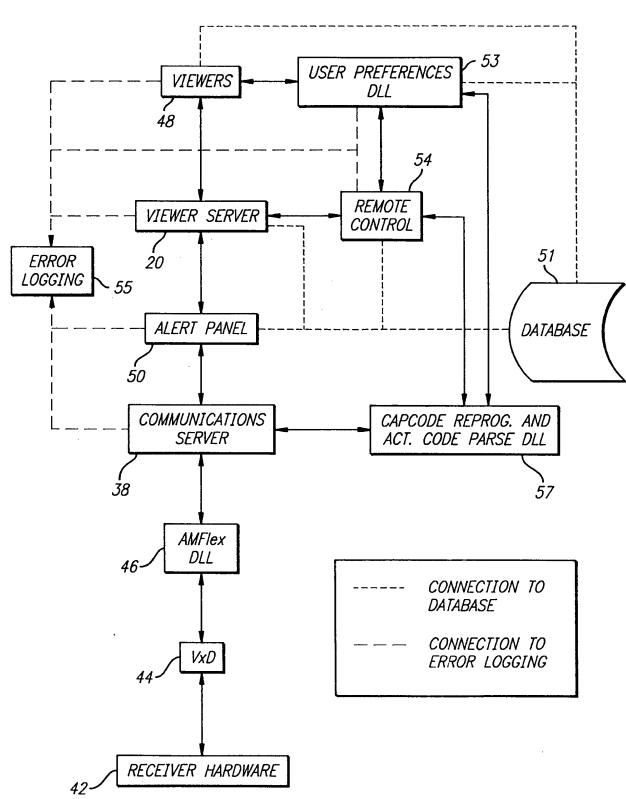
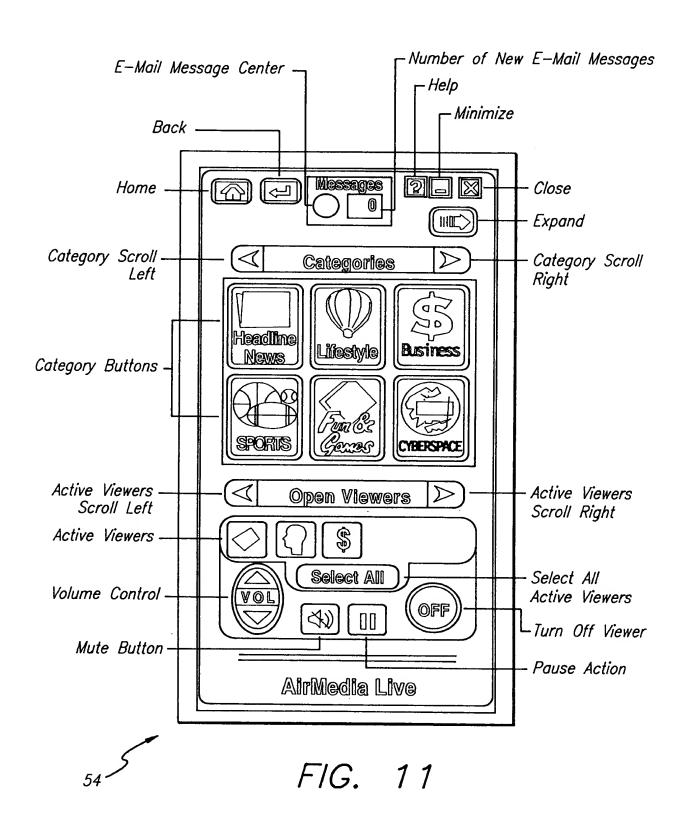


FIG. 10

13/30



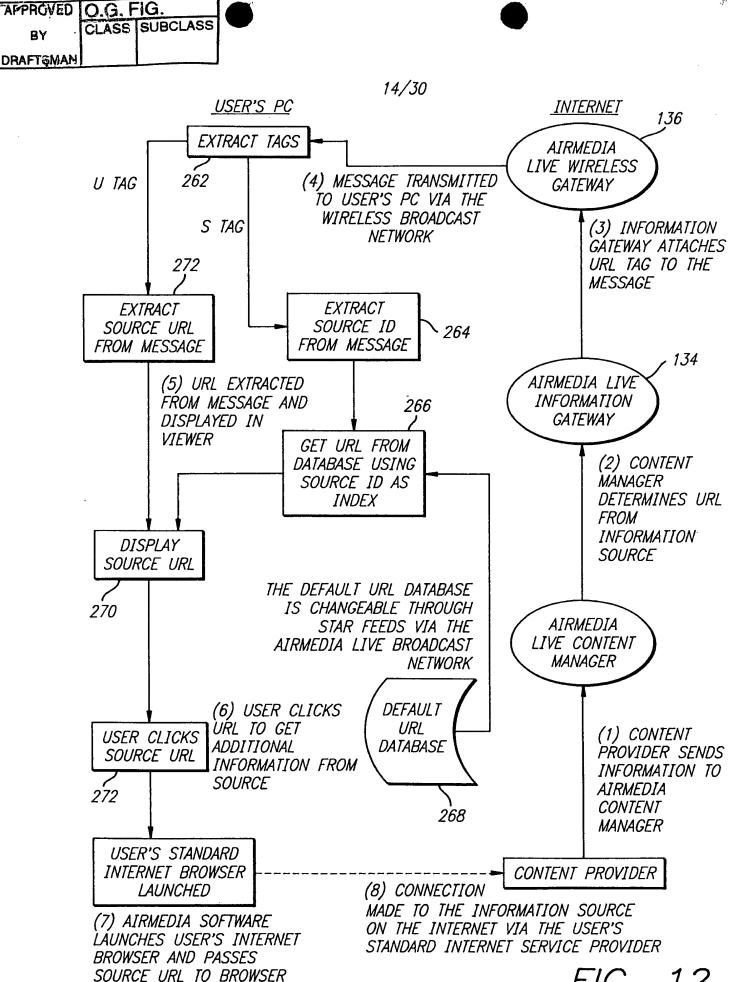
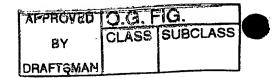


FIG.



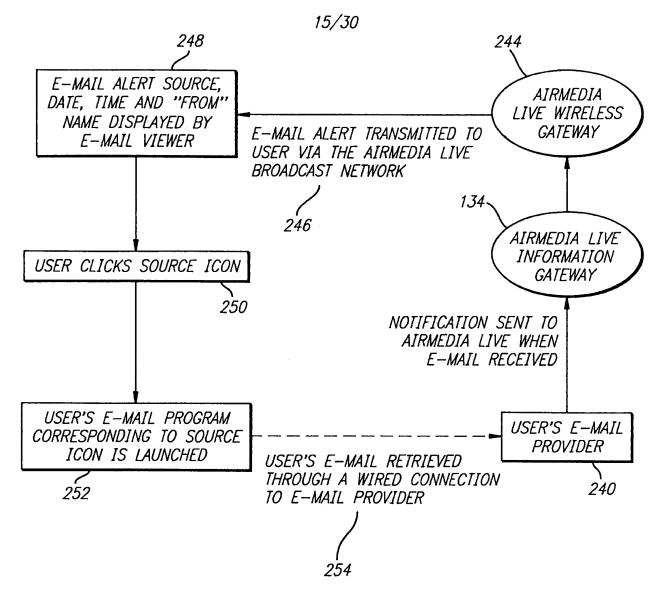
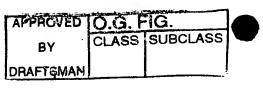
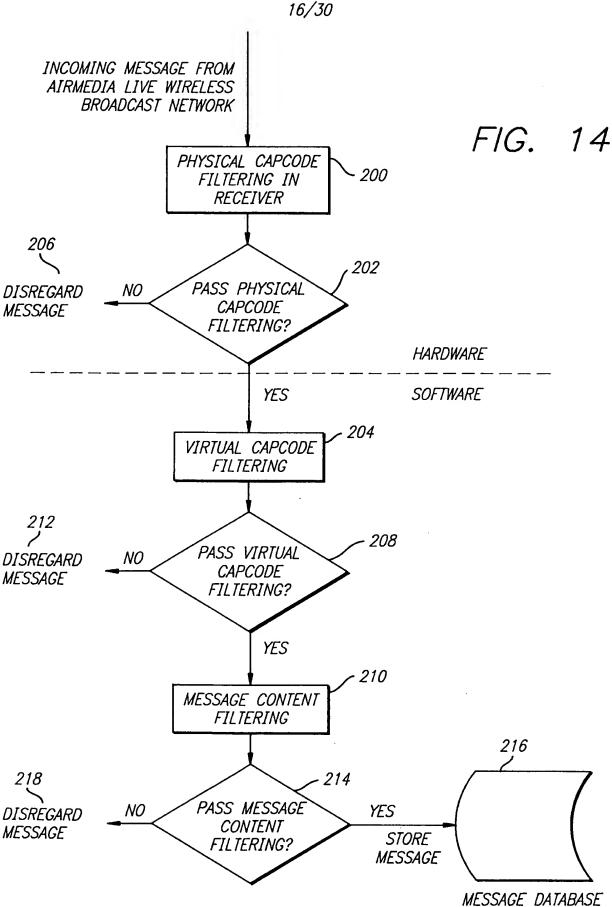
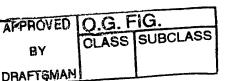


FIG. 13







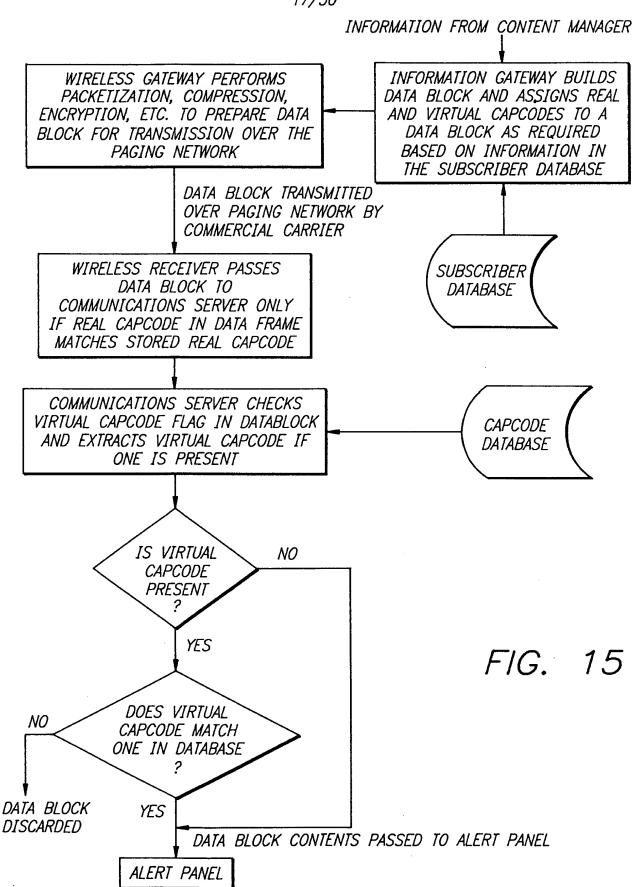
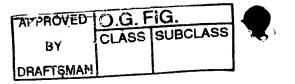


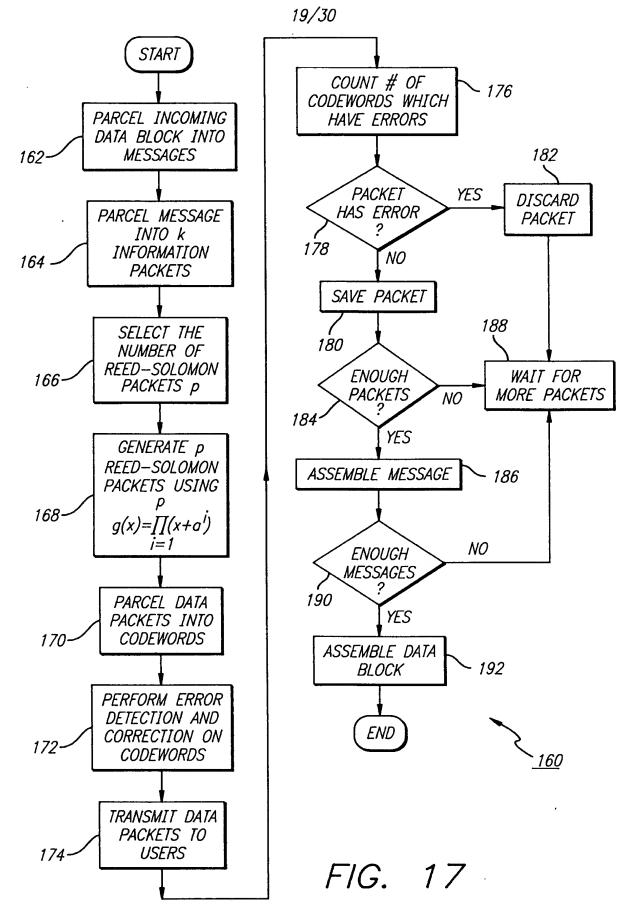
FIG. 16

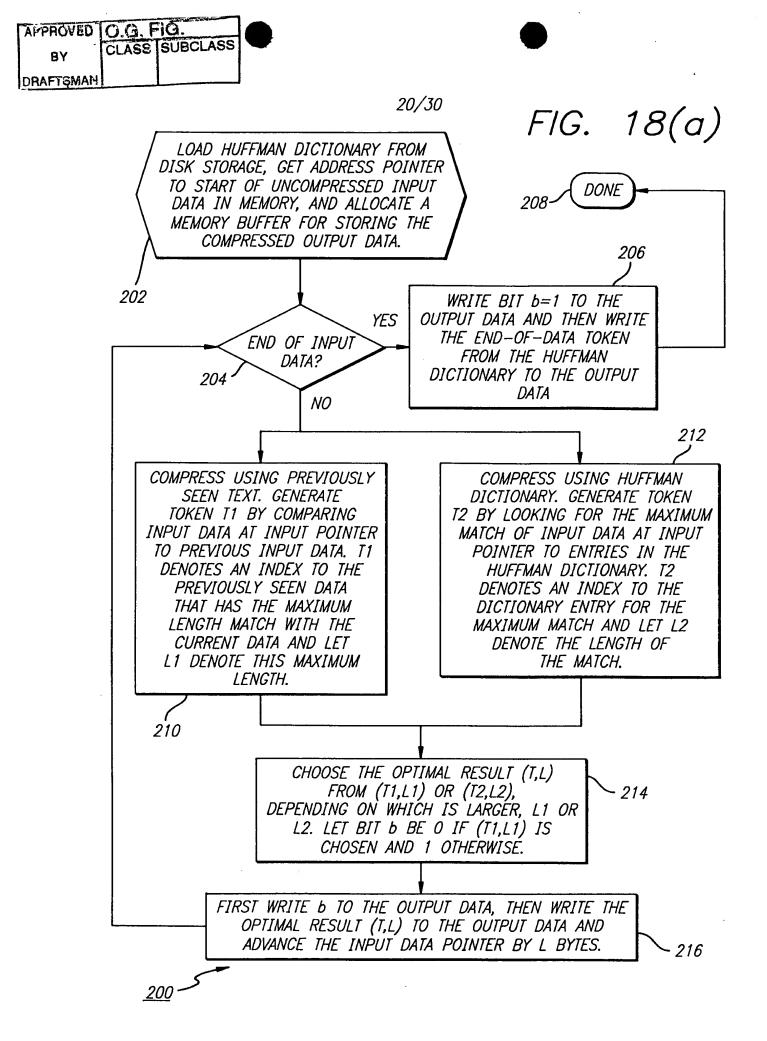
18/30

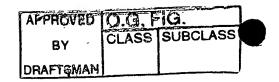
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•	•
header p header p header p .	

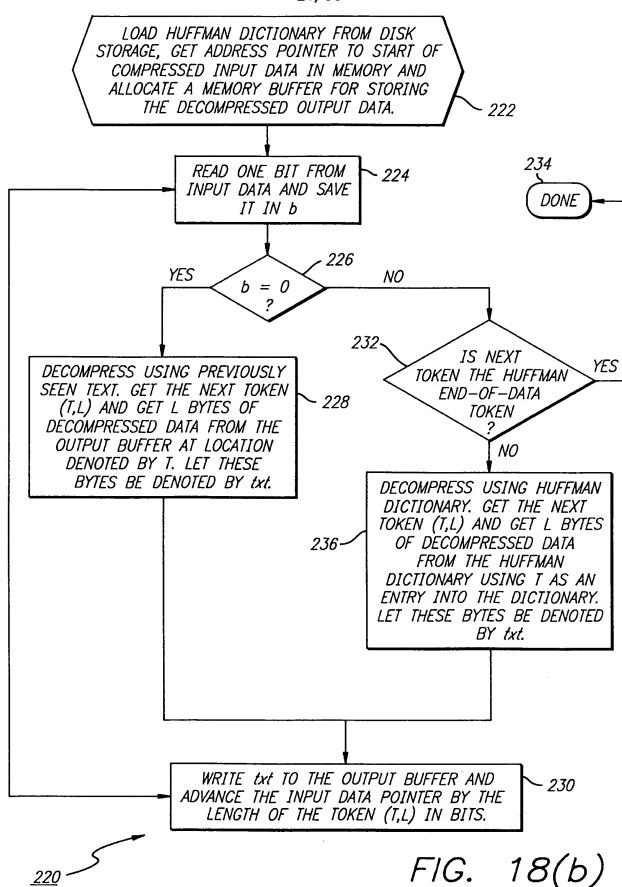
150











LOAD THE PRECOMPUTED STANDARD HASH TABLE HT FOR FILE 1, THE DICTIONARY FILE, FROM MASS STORAGE. SET THE MINIMUM MATCH LENGTH L FROM THE LENGTH USED IN CREATING HT. SET THE MAXIMUM MATCH LENGTH U FROM THE LIMITS ON CONTIGUOUS DATA BLOCK TRANSMISSION SIZE. GET THE MEMORY ADDRESS POINTER TO THE STREAM OF INPUT DATA (FILE 2) TO BE COMPRESSED BY DIFFERENCING WITH FILE 1, AND ALLOCATE A MEMORY BUFFER FOR THE COMPRESSED OUTPUT DATA.

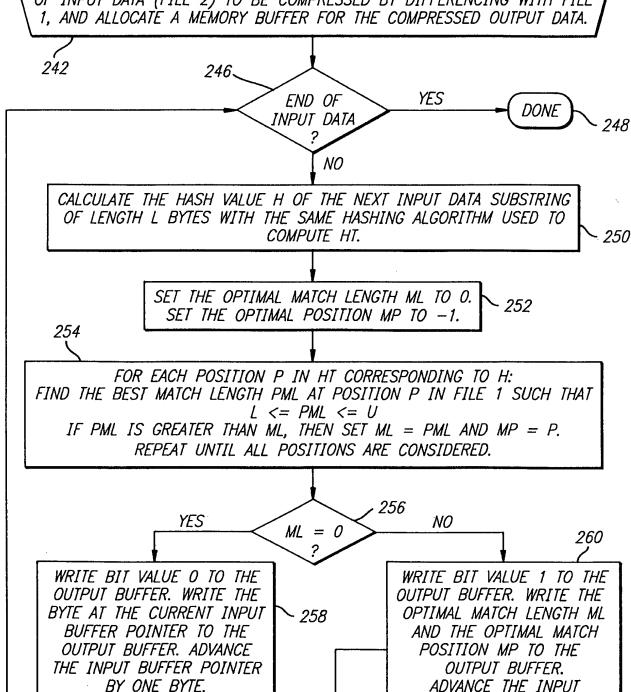
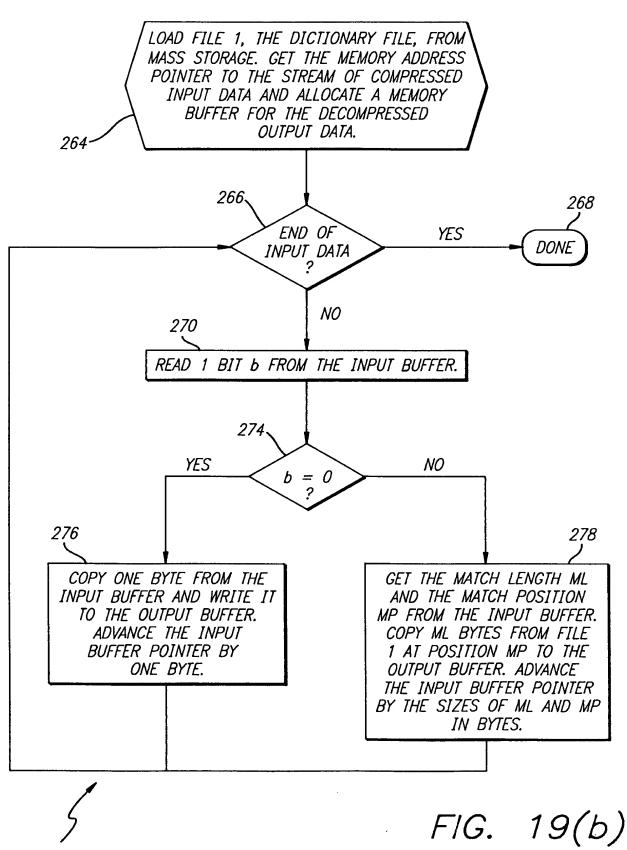


FIG. 19(a)

- 240

BUFFER POINTER BY ML BYTES.

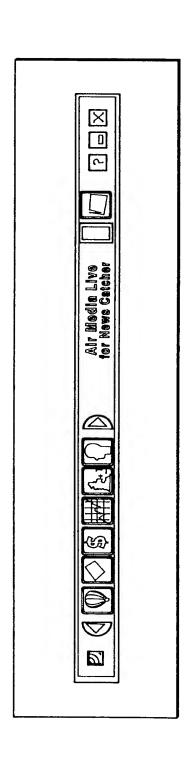
23/30



<u> 262</u>

24/30

FIG. 20



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<u>300</u>

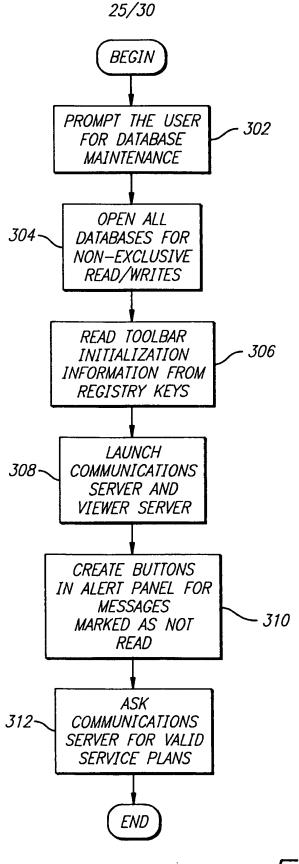


FIG. 21

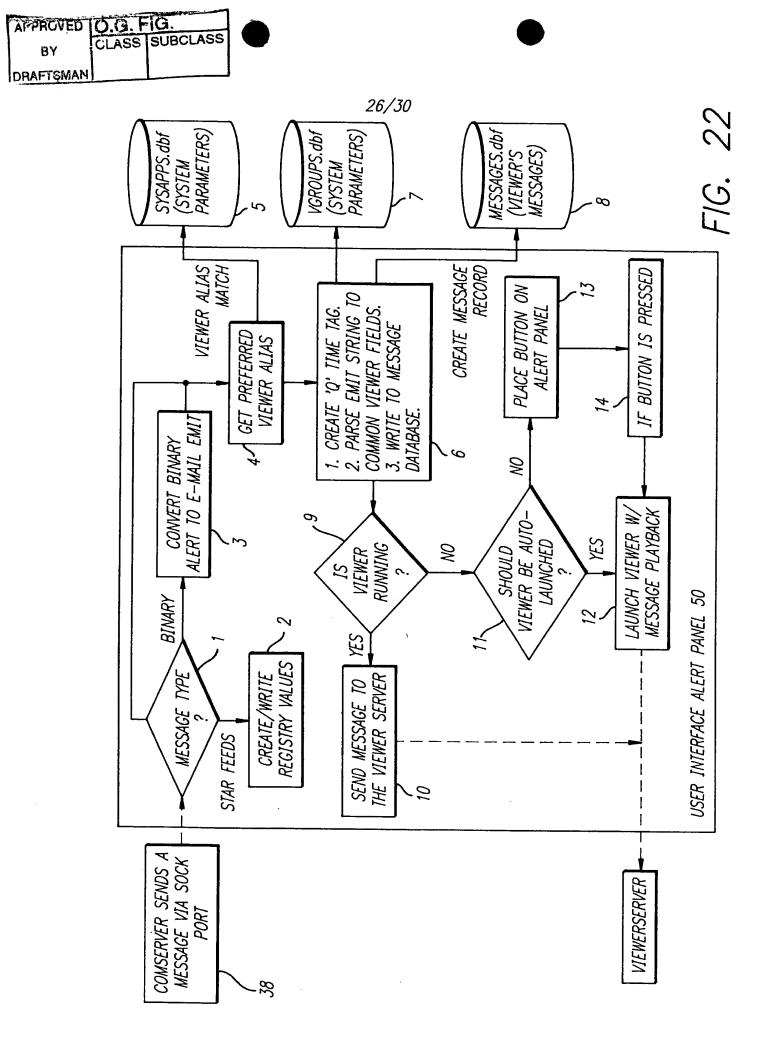


FIG. 23

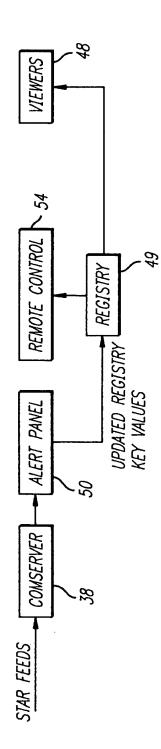


FIG. 24(a)

	The second secon		
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Indexes volume cur	CURRENCIES	FIFTEEN	FAVORITES
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6266.04 285,490 Can	Camada 1.3339 E	BLS	39′ ₈ 34⊕
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	0.000.0		
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All A co Af.		MU 3,875,500	31 ³ 8
11/13/96 13:54 (Eastern)		CPQ 2,854,700	00 757 ₈ 112⊕
Stocks Fiften FA	FIFTEEN FAVORITES-NYSE I 37% -5, BLS 39%	3734 -58 E	21S 39% -34
NEWS Dow Jones is down 30 points	rn 30 points.		

APPROVED Q.G. FIG.

BY CLASS SUBCLASS

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29/30

FIG. 24(b)

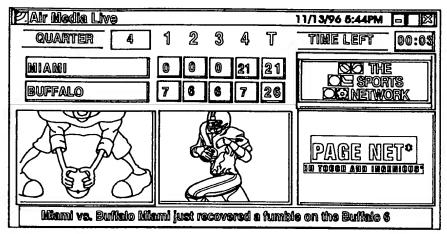


FIG. 24(c)

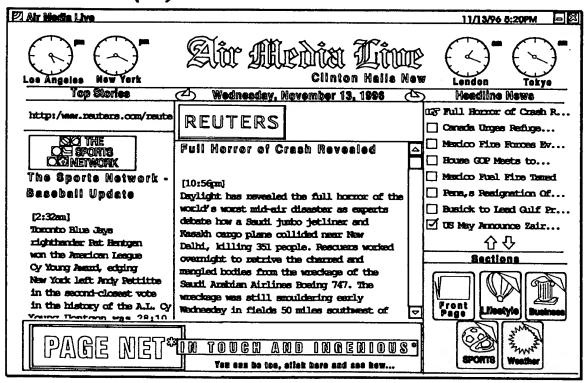


FIG. 24(d)

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